



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,779	06/30/2003	Andrew J. Carroll	020431.1304	1881
53184 7590 05/12/2009 i2 TECHNOLOGIES US, INC. ONE i2 PLACE, 11701 LUNA ROAD DALLAS, TX 75234				
EXAMINER				
LEE, PHILIP C				
ART UNIT		PAPER NUMBER		
24-48				
MAIL DATE		DELIVERY MODE		
05/12/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/611,779

Applicant(s)

CARROLL ET AL.

Examiner

PHILIP C. LEE

Art Unit

2448

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. This action is responsive to the amendment and remarks filed on January 28, 2009.
2. Claims 1-53 are presented for examination.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Objection

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: computer-readable media.

Claim Rejections – 35 USC 102

5. Claims 1-2, 10-12, 18-19, 27-29, 35-36, 44-46 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Jayaram et al, U.S. Patent 6,996,589 (hereinafter Jayaram).
6. Jayaram was cited in the previous office action.
7. As per claims 1, 18, 35 and 52, Jayaram teaches the invention as claimed comprising:

a data integration server coupled with one or more persistent data stores (system with the database conversion engine connected to the source database and target database)(fig. 1; col. 3, lines 33-52; col. 10, lines 56-63) for executing bulk data transfers between the one or more persistent data stores (col. 1, lines 6-9) in connection with an enterprise-level (e.g., billing industry or telecom industry) business workflow (flow of business information such customer information between 320 and 310 of figure 3; abstract; col. 16, lines 1-12; col. 13, lines 6-8), the data integration server comprising:

a plurality of programmatic source interfaces (234, fig. 2, data filters with source extract format specification; col. 14, lines 20-22), each coupled with one or more source data stores (associated with source system 320, 225 of fig. 2), defined according to a common programmatic source interface specification (defined according to source extract format specification)(col. 11, lines 1-5), and exposed within the data integration server during a bulk data transfer (abstract) in connection with the enterprise-level business workflow (abstract; col. 16, lines 1-12); and

a plurality of programmatic target interfaces (270, fig. 2, data upload process consists of tools such as SQL loader (sqlldr; col. 18, lines 56-61) with target scheme specification and mapping specification), each coupled with one or more target data stores (associated with target system 310, fig. 2), defined according to a common programmatic target interface specification (defined according to target scheme specification and mapping specification)(col. 11, lines 5-11), and exposed within the data integration server during a bulk data transfer in connection with the enterprise-level business workflow (abstract), wherein each of the plurality of programmatic source interfaces is configured to:

extract from one or more source data stores one or more data entities for loading into any one or more target data stores during the bulk data transfer (data filters used during bulk transfer to enable the system to receive/pull source data for loading into the target system)(col. 11, lines 5-11; col. 11, line 64-col. 12, line 10); and wherein each of the plurality of programmatic target interfaces is configured to: load into the one or more target data stores the one or more data entities extracted from the one or more source data stores during the bulk data transfer (data filters used during bulk transfer to enable the system to receive/pull source data for loading into the target system)(col. 11, lines 5-11; col. 11, line 64-col. 12, line 10).

8. As per claims 2, 19, and 36, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach the data integration server is configured to expose bulk data transfer operations as services to applications or other systems (col. 10, lines 42-49) (bulk data conversion and transfer is performed for the source system and target system)within an enterprise-level infrastructure (e.g., billing industry or telecom industry infrastructure) and to execute a bulk data transfer operation in response to a request from such an application or other system (col. 10, lines 58-63) (instructions such as scheduling instructions for performing the conversion and transfer).

9. As per claims 10, 27, and 44, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach a particular data store may be a source data store or a target data store for a particular bulk data transfer depending on whether data entities are extracted

from the particular data store or loaded into the particular data store during the particular bulk data transfer (inherent in col. 2, lines 15-20) (system may be source or target depending on whether information is from (i.e., extracted) one system into (i.e., loaded) into another system).

10. As per claims 11, 28, and 45, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach loading data entities comprises inserting, updating, or deleting data entities (col. 11, lines 1-11) (uploading data must comprises inserting data into a target system).

11. As per claims 12, 29, and 46, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach wherein each of the plurality of programmatic source interfaces and the plurality of programmatic target interfaces comprise: one or more resources representing data entities contained in the one or more data stores are defined (col. 14, lines 18-22) (data filter and data upload comprise source extract format specification, mapping specification and target scheme specification, representing the format of data); and the data integration server is configured to, in response to a request to execute a bulk data transfer involving one or more resources contained in one or more data stores (col. 10, lines 56-63) (instructions served to the system for executing of schedule conversion and uploading must include request to execute), create each programmatic interface within which at least one of the resources is defined (in response to conversion, generate source extract format specification within which format is defined) (col. 14, lines 26-28).

Claim Rejections – 35 USC 103

12. Claims 16-17, 33-34, 50-51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram.

13. As per claims 16, 33, and 50, although Jayaram teaches one or more transformation interfaces exposed within the data integration server (col. 10, lines 64-67), each transformation interface: comprising one or more programmatic interfaces defined within the transformation interface (col. 16, lines 24-26); comprising custom transformation logic to be applied to data entities extracted from one or more source data stores in a bulk data transfer, using one or more of the plurality of programmatic source interfaces (col. 16, lines 30-41), before the extracted data entities are loaded into one or more target data stores in the bulk data transfer, using one or more of the plurality of programmatic target interfaces (col. 16, lines 30-41); and the data integration server is further configured to, in connection with creating the programmatic interfaces, create each transformation interface within which at least one of the programmatic interfaces is defined for application of the associated custom transformation logic in the bulk data transfer (col. 16, lines 24-41), however, Jayaram does not specifically teach isolating transformation logic from defined programmatic interfaces. It would have been obvious to one having ordinary skill in the art at the time of the invention was made that the transformation logic can be coded separately from logical relationship (i.e., programmatic interfaces) because by doing so it would be easier to develop separate segments of codes in a complex software system.

14. As per claims 17, 34, and 51, Jayaram teaches the invention as claimed in claim 16, 33, and 50 above. Jayaram further teach a controller (inherently comprised) supported within the data integration server and operable to use a transformation interface in executing an individual bulk data transfer without using a commercially available Extract-Transform-Load (ETL) tool in connection with the bulk data transfer (col. 10, lines 24-67) (note that ETL is not used in the conversion engine).

15. As per claim 53, it is rejected for the same reason as claims 1, 2, 16, and 17 above.

16. Claims 3, 20 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Shannon et al, U.S. Patent Application Publication 2002/0046301 (hereinafter Shannon).

17. Shannon was cited in the previous office action.

18. As per claims 3, 20, and 37, Jayaram does not teach Java interfaces. Shannon teaches Java interfaces ([0031] and claim 5).

19. Because Jayaram and Shannon teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of JAVA interface of Shannon's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By

using the known technique of JAVA interface, it would allow Jayaram's system to map transferred data between the systems.

20. Claims 4-6, 8, 21-23, 25, 38-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Casagrande et al, U.S. Patent 6,381,709 (hereinafter Casagrande).

21. Casagrande was cited in the previous office action.

22. As per claims 4, 21, and 38, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic interface is exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is configured to: create the programmatic interface to enable extraction of the data from or loading of the data into the data store (col. 14, lines 26-28); and for data extraction, as the programmatic source interface produces the data extracted from the data store, send the outgoing data; or for data loading, as the data arrives, send the incoming data to the programmatic target interface for loading into the data store (col. 11, lines 1-11), however, Jayaram does not teach industry standard interface and industry standard protocol. Casagrande teaches an interface supporting data transfer according to an industry standard protocol (fig. 4, col. 8, lines 60-67); receive a request from a client indicating that the client is extracting data from or loading data into a data store in accordance with the industry standard protocol (col. 3, lines 48-51); and send the outgoing data to the client in accordance with the industry standard protocol (col. 3, lines 1-4).

23. Because both Jayaram and Casagrande teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of FTP interface of transferring data in Casagrande's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of FTP interface, it would allow Jayaram's system to exchange data between systems on a network.

24. As per claims 5, 22, and 39, Jayaram and Casagrande teach the invention substantially as claimed in claims 4, 21, and 38 above. Jayaram further teach the data integration server allows a client supporting an industry standard protocol for bulk data transfers to perform bulk data transfers with respect to an existing data store using a programmatic interface whether or not the existing data store or an associated existing application itself supports bulk data transfers in accordance with the industry standard protocol (col. 10, lines 43-63; col. 11, lines 23-27).

25. As per claims 6, 23, and 40, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic source interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the programmatic source interface to enable extraction of the data from the one or more source data store (col. 14, lines 26-28); and as the programmatic source interface produces the data extracted from the one or more source data store, send the outgoing data (col. 11, lines 1-11), however, Jayaram does not teach industry standard File Transfer

Protocol (FTP) interface and FTP industry standard protocol. Casagrande teaches a FTP interface supporting data transfer according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allow an FTP client to open an FTP connection informing the data integration server that the FTP client is downloading a stream of data from the corresponding source data store (col. 6, lines 10-15; col. 9, lines 58-60); and as the interface produces the stream of data extracted from the one or more source data stores, send the outgoing stream of data to the FTP client in accordance with FTP (fig. 4, col. 3, lines 1-4).

26. Because both Jayaram and Casagrande teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of FTP interface of transferring data in Casagrande's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of FTP interface, it would allow Jayaram's system to exchange data between systems on a network.

27. As per claims 8, 25, and 42, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic source interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the programmatic source interface to enable loading of the data into the one or more source data store (col. 14, lines 26-28); and as the data arrives, send the incoming data to the programmatic target interface for loading into the one or more target data stores (col. 11, lines 1-11), however, Jayaram does not teach industry standard File Transfer

Protocol (FTP) interface and FTP industry standard protocol. Casagrande teaches a FTP interface supporting data transfer according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allow an FTP client to open an FTP connection informing the data integration server that the FTP client is uploading a stream of data to the one or more target data store (col. 6, lines 10-15; col. 9, lines 58-60); and as the stream of data arrives from the FTP client in accordance with FTP, send the outgoing stream of data into the data store (fig. 4, col. 3, lines 1-4) (i.e., the server of fig. 4 is interpreted as the FTP client and FTP client 12 and 24 of fig. 4 is the interpreted as the data store).

28. Because both Jayaram and Casagrande teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of FTP interface of transferring data in Casagrande's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of FTP interface, it would allow Jayaram's system to exchange data between systems on a network.

29. Claims 13-15, 30-32 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Walsh et al, U.S. Patent Application Publication 2003/0233249 (hereinafter Walsh).

30. Walsh was cited in the previous office action.

31. As per claims 13, 30, and 47, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Although Jayaram teach connect to data stores (fig. 1), whether or not the tool is compatible with these data stores, using the programmatic interfaces to extract data entities from and load data entities into these data stores (col. 11, lines 1-11), however, Jayaram does not teach ETL tool. Walsh teaches connect directly to data stores (fig. 1) with which the ETL tool is compatible to extract data entities directly from and load data entities directly into these data stores ([0092]).

32. Because both Jayaram and Walsh teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of ETL tool of transferring data in Walsh's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of ETL tool, it would allow Jayaram's system to exchange data between systems on a network.

33. As per claims 14, 31, and 48, Jayaram and Walsh teach the invention as claimed in claims 13, 30, and 47 above. Although Jayaram teach the data integration server is operable to use programmatic interfaces to support compatibility between any one or more data stores (col. 2, lines 56-60), however, Jayaram and Walsh do not teach to support compatibility between any commercially available ETL tool. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to support ETL tool or any type of tools for the data

stores in order to provide a data store independent system allowing data conversion from any source data stores into any target data stores.

34. As per claims 15, 32, and 49, Jayaram and Walsh teach the invention as claimed in claims 14, 31, and 48 above. Jayaram further teach the data integration server supports a controller operable to execute individual bulk data transfers using programmatic interfaces where either: an Extract-Transform-Load (ETL) tool is not present (col. 3, lines 16-24) (i.e., ETL is not present in the conversion engine); or an ETL tool is present but its capabilities are not needed to transform data entities extracted from one or more source data stores, using one or more of the plurality of programmatic source interfaces, before the extracted data entities are loaded into one or more target data stores, using one or more of the plurality of programmatic target interfaces, because physical database schemas of the source and target data stores are at least substantially similar.

35. Claims 7, 9, 24, 26, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram and Casagrande in view of Walsh.

36. As per claims 7, 9, 24, 26, 41, and 43, Jayaram and Casagrande teach the invention substantially as claimed in claims 6, 8, 23, 25, 40, and 42 above. Jayaram and Casagrande do not teach Extract-Transform-Load (ETL) tool. Walsh teaches a commercially available Extract-Transform-Load (ETL) tool supported within the data integration server ([0089], [0092]).

37. Because Jayaram, Casagrande and Walsh teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of ETL tool of transferring data in Walsh's system to improve similar method of interfacing systems for data transfer in Jayaram's and Casagrande's systems in the same way. By using the known technique of ETL tool, it would allow Jayaram's and Casagrande's systems to exchange data between systems on a network.

38. Applicant's arguments with respect to claims 1-53, filed 1/28/09, have been fully considered but they are not persuasive.

39. In the remark, applicant argued that:

(1) The objection under 37 DFR 1.75(d)(1) should be withdrawn.

(2) Jayaram fails to teach computer-implemented

Jayaram fails to teach data integration server coupled to one or more persistent data stores for executing bulk data transfers between persistent data stores in connection with an enterprise-level business workflow, the data integration server comprising a plurality of programmatic source interfaces, each coupled with one or more source data stores, defined according to a common programmatic source interface specification, and exposed within the data integration server during a bulk data transfer in connection with the enterprise-level business workflow; and a plurality of programmatic target interfaces, each coupled with one or more target data

stores, defined according to a common programmatic target interface specification, and exposed within the data integration server during a bulk data transfer in connection with the enterprise-level business workflow, wherein each of the plurality of programmatic source interfaces is configured to: extract from one or more source data stores one or more data entities for loading into any one or more target data stores during the bulk data transfer; and wherein each of the plurality of programmatic target interfaces is configured to: load into the one or more target data stores the one or more data entities extracted from the one or more source data stores during the bulk data transfer.

(3) office action fails to establish a prima facie case of anticipation over in claims 1, 2, 10-12, 18-19, 27-29, 35-36, 44-46 and 52 under 35 USC 102 with respect to Jayaram because Jayaram fails to identically disclose each and every element of the claimed invention.

(4) Office action fails to establish a prima facie case of obviousness based on the “Examination Guidelines for Determining Obviousness Under 35 USC 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*”

(5) Office action fails to provide an indication of the level of ordinary skill.

(6) Office action fails to explain why the difference between the combination of Jayaram, Shannon, Casagrande, Walsh, and the claimed invention would have been obvious to one of ordinary skill in the art.

40. In response to point (1), applicant's argument has been considered and addressed to in the previous office action. As stated in the previous office action, according to 608.01(o) of the MPEP states: " While an applicant is not limited to the nomenclature used in the application as filed, he or she should make appropriate amendment of the specification whenever this nomenclature is departed from by amendment of the claims so as to have clear support or antecedent basis in the specification for the new terms appearing in the claims. This is necessary in order to insure certainty in construing the claims in the light of the specification, Ex parte Kotler, 1901 C.D. 62, 95 O.G. 2684 (Comm'r Pat. 1901). See 37 CFR 1.75, MPEP § 608.01(i) and § 1302.01. ...If the examiner determines that the claims presented late in prosecution do not comply with 37 CFR 1.75(d)(1), applicant will be required to make appropriate amendment to the description to provide clear support or antecedent basis for the terms appearing in the claims provided no new matter is introduced." In this instance, the term "computer-readable media" does not comply with 37 CFR 1.75(d)(1), applicant is required to make appropriate amendment to the description to provide clear support or antecedent basis for this term provided no new matter is introduced.

41. In response to points (2) and (3), the rejections set forth above provide more concise explanation for the claim limitation. Hence, applicant argument is moot in view of the concise explanation set forth above.

42. In response to points (4) and (5), applicant's arguments have been considered and addressed to in the previous office action. As stated in the previous office action, the rejections set forth above provide the factual findings and rationale for obviousness based on Court Decision in *KSR International Co. v. Teleflex Inc.*, which include an indication of the level of ordinary skill. Hence, applicant argument is moot in view of the factual findings and the rationales set forth above.

43. In response to point (6), applicant's argument has been considered and addressed to in the previous office action. As stated in the previous office action, the rejections set forth above provide rationale for obviousness based on Court Decision in *KSR International Co. v. Teleflex Inc.*, which include explanation of the difference between the combination of Jayaram, Shannon, Casagrande, Walsh, and the claimed invention would have been obvious to one of ordinary skill in the art. Hence, applicant argument is moot in view of the rationales set forth above. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's

disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

44. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private

Art Unit: 2448

PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip C Lee/

Primary Examiner, Art Unit 2448